

CENTRAL INTELLIGENCE AGENCY
INFORMATION REPORT

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COUNTRY East Germany

REPORT

SUBJECT VEB Werk fuer Fernmeldewesen(WF)
Development of a Quartz Discriminator

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This is UNEVALUATED Information

THE SOURCE EVALUATIONS IN THIS REPORT ARE DEFINITIVE.
THE APPRAISAL OF CONTENT IS TENTATIVE.
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1. At VEB Werk fuer Fernmeldewesen(WF), Berlin-Oberschoeneweide, a so-called coil discriminator (Spulendiskriminator) is currently being used for frequency control of the audio transmitters of television transmitters. Part of the discriminator is placed in a thermostat (See figure 1 of Annex), the temperature of which amounts to plus 60° Centigrade. Temperature constancy is plus/minus 0.5° Centigrade. Frequency constancy of the discriminator amounts to three times ten power minus five.
2. Since the East German Ministry for Post and Telecommunications requires that the audio transmitter of a television transmitter have a frequency constancy of five times ten power minus six for a period of one month, the discriminators described above cannot be used. Therefore, at the end of the first quarter of 1955 the WF plant was ordered to develop a so-called quartz discriminator. The quartz discriminator is actually the reconstruction of a Telefunken patent. The reason quartz discriminators are only now being developed is that until about April 1955 it was impossible to obtain the proper quartzes from VEB Zeiss Jena. The quartz discriminator is also placed in a thermostat (see figure 2 of Annex), the temperature of which amounts to plus 60° Centigrade. The frequency constancy of the discriminator amounts to five times ten power minus seven for a period of over one month. A laboratory model of the quartz discriminator was completed in mid-June 1955.

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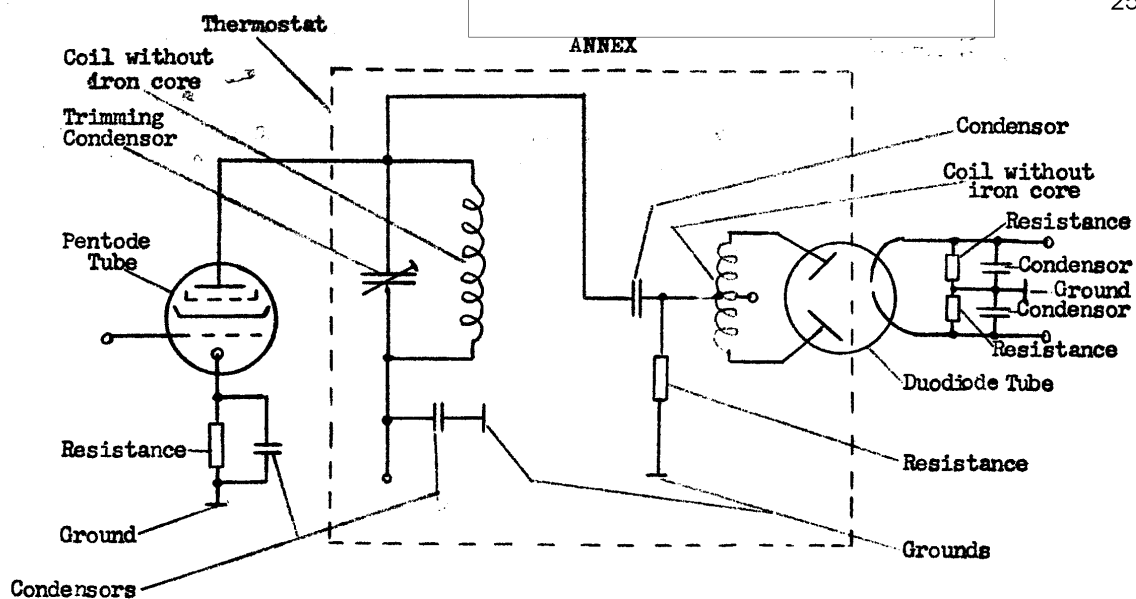


Figure 1 - Coil Discriminator - Circuit Diagram

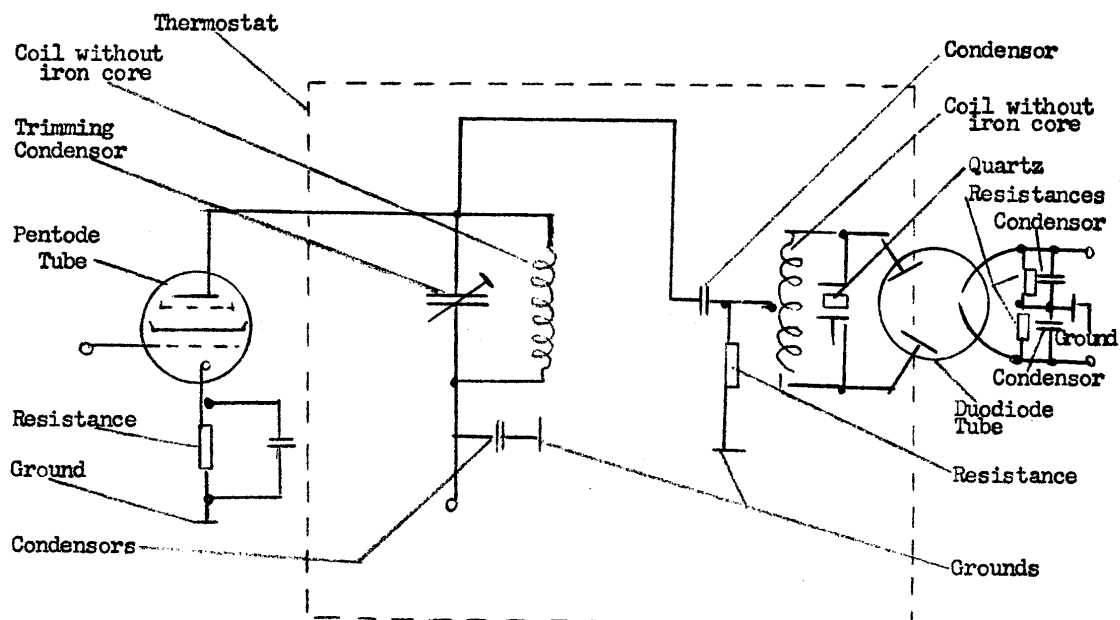


Figure 2 - Quartz Discriminator - Circuit Diagram

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